

### **DETAILED ACTION**

This office action is responsive to amendment filed on 10/22/2009. ***Response to***

#### ***Amendment***

The Examiner has acknowledged the amended claims 1, 8 – 36, and the amended specification. The objection of claims 1, 12, and 24 and the rejection of claims 8 – 11, 20 – 23, and 26 – 30 have been withdrawn. The 35 U.S.C. 101 rejection is still maintained.

#### ***Response to Arguments***

Applicant's arguments filed on 10/22/2009 have been fully considered but they are not persuasive.

#### ***Response to Arguments***

Applicant's arguments filed on 04/13/2009 have been fully considered but they are not persuasive.

Regarding Applicant's argument (pages 11 and 12) that the distinction between the claimed invention and Sistanizadeh is the presently claimed invention receives input from a user application, whereas Sistanizadeh and others rely on manual input from personnel such as IT staff. The Examiner respectfully disagrees with Applicants' assertion because Sistanizadeh discloses a service level manager application in communication with the persistence layer module and the user interface. The functions of this application include monitoring the operations of the extended-area data communications network, by analyzing semantic transparency or time transparency of data traffic through the network based on the data provided by the persistence layer

module from the agents in the network (see col. 2, lines 55 – 60). Applicants' disclosure (page 6, second paragraph), states that **“the OSA interacts with the optical communication network to obtain various communication services and manages those communication services for the network user based upon predetermined parameters defined by the network users. In essence, then, the optical communication network provides a “core” set of communication services that can be accessed by the OSA, and the OSA provides advanced communication services for the network user using the “core” set of communication services provided by the optical communication network”**.

Applicants also argued (pages 12 – 14) that the Examiner has misunderstood the point being made by applicant. The exposure that must be avoided is of the optical network topology to the user. In a single network run by one company it might be acceptable to allow everyone access to topology information. However, the presently claimed invention is directed to the real world scenario where enterprises (users) have private networks that are interconnected by carrier networks, e.g., Walmart store networks interconnected by Verizon and AT&T. It is a non-trivial problem to enable user applications operating in such user network segments to request and provision carrier network resources without exposing carrier network topology to, for example, curious or malicious user IT staff. Consequently, it is not the ability to input requirements that causes access to the interface to be a problem - it is the fact that Sistanizadeh also allows access to topology information through the interface. As mentioned in the last office action, they have to input their parameters on the user interface, and the

application program resides on the user interface manages the user's network based on the received input parameters using an agent. In figure 6 of the specification, the OSA 610 manages the communication services for the user based upon predetermined parameters defined by the user. The ASON controller 340 provides network status information to the network management/optimization elements 380 and receives network updates from the network management/optimization elements 380 via the ASON NMI 370. Based on this passage recited from Applicant's specification, it is to the Examiner's understanding that the users in the presently invention do have access also to topology information through the interface since they provide predefined parameters to the OSA in order to manage the communication services for the user.

Thus, Sistanizadeh reads on the claimed invention.

Applicants are interpreting the claims very narrow without considering the broad teaching of the references used in the rejection. Applicants are reminded that the examiner is entitled to the broadest reasonable interpretation of the claims. The Applicants always have the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater 162 USPQ 541, 550-51 (CCPA 1969).

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 - 36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. According to the specification (pages 38 - 41), the terms "optical service agent and optical service logic" can be interpreted as modules, programs, functions, and subroutines. **Such terms need to be stored on a computer readable storage medium and executed by a computer to perform the steps/functions as recited in the claims.** Also, **for claim 31**, the computer usable medium covers both forms of non-transitory tangible media and transitory propagating signals per se. Such can be amended to cover only statutory embodiments by adding the limitation of " non-transitory" to the claim. Thus, the claims are software per se based on the portions of the disclosure mentioned above.

Claims 2 – 11, 13 – 23, 25 – 30, and 32 36 are necessarily rejected as being dependent upon the rejection of claims 1, 12, 24, and 31.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 9, 11 – 21, and 23 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sistanizadeh et al. US Patent No. 6,681,232 in view of Ghani US Patent No. 6,728,484. Sistanizadeh teaches the invention as claimed including a method for provisioning bandwidth (see abstract). Ghani teaches provisioning an optical network (see abstract).

As per claim 1, Sistanizadeh teaches an Apparatus for providing bandwidth management services for a user in an optical communication system, comprising; a network device with an optical service agent including: an application programming interface [API 113] which receives input from a user application indicative of application-specific bandwidth management service requirements (col. 2, lines 37 – 67; *Sistanizadeh discloses a service level manager application in communication with the persistence layer module and the user interface. The functions of this application include monitoring the operations of the extended-area data communications network, by analyzing semantic transparency or time transparency of data traffic through the network based on the data provided by the persistence layer module from the agents in the network* ); a user-to-network interface (UNI) which interfaces with an optical communication network (column 7, lines 1-40); a peer-to-peer interface which interfaces

with peer users (personal computers; column 7, lines 1-40); and optical service logic which interacts with the application programming interface [API 113] and the optical communication network via the UNI and with the peer users via the peer-to-peer interface for providing said application specific bandwidth management services for the user (SLM Application Server; column 5, lines 34-55; Figure 2; customer request increase in bandwidth; column 5, lines 54-67; column 6, lines 54-65); and an optical service server which authenticates the user, obtains network topological information, and to employs the network topological information on behalf of the optical service agent for providing bandwidth management services such that the network topological information is not exposed to the user (provisioning service module, authenticates user and user has options to increase or decrease bandwidth, but the user does not access the network topology, the topology is accessed by the provisioning service module column 21, lines 15-63).

Sistanizadeh teaches substantially all the limitations, but fails to teach in which data is processed and transported on in optical form, and including the provision of a new optical communication path between specified nodes in the optical communication network.

Ghani et al. teaches in which data is processed and transported on in optical form, and including the provision of a new optical communication path between specified nodes in the optical communication network. See column 1, lines 40-49; column 4, lines 50-67; column 5, lines 20-25; column 7, lines 49-60; column 9, lines 13-30; column 10, lines 5-49. It would have been obvious to a person of ordinary skill in the

art at the time of the invention to combine the provision of Sistanizadeh with the all optical network of Ghani et al. A person of ordinary skill in the art would have been motivated to do this to provide adequate provisioning of the backbone network (Sistanizadeh column 5, lines 54-64).

As per claims 12 and 24 Sistanizadeh teaches an apparatus and a system comprising: a network device including: a user application requiring communication services from an optical communication network (column 7, lines 40-47); and optical service agent responsive to signaling from the user application [end user customer requests bandwidth increase, the SLM can be accessed by the NOC or by a customer using a web based interface; column 2, lines 63-67; column 5, lines 54-67; column 6, lines 54-67; column 7, lines 10-40] for providing bandwidth management services for the user application (optical service logic; Figure 2; column 5, lines 34-55); and an optical service server which authenticates the user application and obtains network topological information, and to employ the network topological information on behalf of the optical service agent for providing bandwidth management services such that the network topological information is not exposed to the user (provisioning service module, authenticates user and user has options to increase or decrease bandwidth, but the user does not access the network topology, the topology is accessed by the provisioning service module column 21, lines 15-63).

Sistanizadeh does not teach in which data is processed and transported on in optical form, and including the provision of a new optical communication path between specified nodes in the optical communication network. Ghani teaches in which data is

processed and transported on in optical form, and including the provision of a new optical communication path between specified nodes in the optical communication network. See column 1, lines 40-49; column 4, lines 50-67; column 5, lines 20-25; column 7, lines 49-60; column 9, lines 13-30; column 10, lines 5-49.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the provision of Sistanizadeh with the all optical network of Ghani et al. A person of ordinary skill in the art would have been motivated to do this to provide adequate provisioning of the backbone network (Sistanizadeh column 5, lines 54-64).

As per claims 2, 14, and 25 Sistanizadeh and Ghani et al. teach the apparatus, device, and system of claims 1, 13, 24, wherein the optical communication network comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI (Sistanizadeh column 30, lines 19-32).

As per claims 3, 15 and 26 Sistanizadeh and Ghani et al. teach the apparatus, device, and system of claims 1, 13 and 24 wherein the optical service logic comprises: bandwidth monitoring logic for monitoring bandwidth utilization on a connection (Sistanizadeh column 17, lines 45-67; column 15, lines 18-35; column 19, lines 21-35).

As per claims 4, 16, and 27, Sistanizadeh and Ghani et al. teach the apparatus, device, and system of claims 1, 13, and 24, wherein the optical service logic comprises: bandwidth controlling logic for controlling bandwidth utilization on a connection (Sistanizadeh column 15, lines 20-55).

As per claims 5, 17 and 28, Sistanizadeh and Ghani et al. teach the apparatus,



device, and system of claims 1, 13 and 24, wherein the optical service logic comprises: bandwidth obtaining logic for obtaining additional bandwidth for a connection (Sistanizadeh column 11, lines 34-67; column 19, lines 1-20; column 21, lines 45-67; column 22, lines 15-27).

As per claims 6, 18 and 29, Sistanizadeh and Ghani et al. teach the apparatus, device, and system of claims 1, 13, and 24, wherein the optical service logic comprises: bandwidth relinquishing logic for relinquishing excess bandwidth for a connection (Sistanizadeh column 11, lines 34-67; column 19, lines 1-20; column 21, lines 45-67; column 22, lines 15-27).

As per claims 7, 19 and 30 Sistanizadeh and Ghani et al. teach the apparatus, device, and system of claims 1, 13 and 24, wherein the optical service logic comprises: bandwidth allocation logic for allocating bandwidth among multiple connections (Sistanizadeh column 11, lines 34-67; column 19, lines 1-20; column 21, lines 45-67; column 22, lines 15-27).

As per claims 8 and 20 Sistanizadeh and Ghani et al. teach the apparatus, device, and method of claims 4 and 16 wherein the bandwidth controlling logic is operably coupled to prevent bandwidth utilization on the connection from exceeding a predetermined maximum bandwidth utilization (Sistanizadeh column 15, lines 20-55).

As per claims 9, and 21, Sistanizadeh and Ghani et al. teach the apparatus, device, and method of claims 5 and 17, wherein the bandwidth obtaining logic is operably coupled to obtain the additional bandwidth for the connection upon determining that bandwidth utilization on connection exceeds a predetermined level

(Sistanizadeh column 15, lines 18-35; column 17, lines 45-67; column 19, lines 21-35).

As per claims 11 and 23 Sistanizadeh and Ghani et al. teach the apparatus, device, and method of claims 7 and 19 wherein the bandwidth allocation logic is operably coupled to identify an over-utilized connection and an under-utilized connection and to transfer traffic from the over-utilized connection to the under-utilized connection Sistanizadeh (column 15, lines 20-55; column 11, lines 34-67; column 19, lines 1-35; column 21, lines 45-67; column 22, lines 15-27).

As per claim 13, Sistanizadeh and Ghani teach the device of claim 12, wherein the optical service agent comprises: a user-to-network interface (UNI) for interfacing with an optical communication network (Sistanizadeh; column 7, lines 1-40); a peer-to-peer interface for interfacing with peer users (Sistanizadeh; personal computers; column 7, lines 1-40); and optical service logic for interfacing with the optical communication network via the UNI and with the peer users via the peer-to-peer interface for providing said bandwidth management services for the user application (Sistanizadeh; SLM Application Server; column 5, lines 34-55; Figure 2; customer request increase in bandwidth; column 5, lines 54-67; column 6, lines 54-65).

***Allowable Subject Matter***

Claims 10 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. **Applicant needs to insert the limitations of claims 10 and 22 including all the limitations of the base claims and**

**any intervening claims into their independent claims (claims 1 and 12). The Examiner also suggested amended claim 24 the same way as claim 12).**

**Claims 31 – 36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101 set forth in this Office action.**

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **YVES DALENCOURT** whose telephone number is (571)272-3998. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YVES DALENCOURT/  
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